

State Water Resources Control Board
Participation in the
OROVILLE FACILITY RELICENSING
(FERC License No. 2100)

Agency Authority

In California, the State Water Resources Control Board (SWRCB), along with the Regional Water Quality Control Boards, has responsibility for the implementation and enforcement of the Federal Clean Water Act (CWA) (33 U.S.C. §§1251-1387). Section 303 of the CWA (33 USC §1313) requires the State to develop and adopt water quality standards for water bodies in all regions of the state. Pursuant to this CWA requirement and to the State's Porter-Cologne Water Quality Control Act (Water Code §§13000-14958), the Central Valley Regional Water Quality Control Board (RWQCB) has developed, and the SWRCB and the U.S. Environmental Protection Agency have approved, the Water Quality Control Plan for the Central Valley Region (Basin Plan). The Basin Plan designates beneficial uses of surface waters within the Sacramento River and the San Joaquin River Basins and prescribes water quality objectives designed to protect those uses. Beneficial uses designated specifically for Lake Oroville and the Feather River immediately downstream of the facility include municipal and domestic supply, irrigation, power generation, contact and non-contact recreation, freshwater habitat (cold and warm), aquatic migration and spawning habitats (cold and warm), and wildlife habitat.

Section 401 of the CWA (33 USC §1341) requires that every applicant for a federal license or permit to conduct activities which may result in a discharge to navigable waters must obtain certification that these activities will be in compliance with applicable water quality standards. Section 16.8(f)(7)(i) of FERC Regulations (18 CFR) explicitly references the requirement for 401 Certification on hydroelectric license applications. In California the SWRCB is the state agency authorized to grant, waive, or deny water quality certification. Under Section 401 authority, the SWRCB may issue a water quality certification for the federal relicensing of the Oroville Facility (FERC #2100) if it is determined that there is reasonable assurance that the activity is consistent with Basin Plan standards and the CWA. Facility design and operation must be found to be protective of the designated beneficial uses to the extent achievable in light of controllable factors and economic considerations. Should changes be required in maintenance or operation of the facility to meet water quality objectives protective of the beneficial uses, any 401 Certification issued will be conditioned as necessary for compliance with those water quality standards.

Resource Issues and Concerns

In working with the licensee and stakeholders on the FERC relicensing of the Oroville Facility, SWRCB staff will look at project effects on all designated beneficial uses of the waterway. Water quality objectives, including levels for bacteria, chemical constituents, dissolved oxygen, pH, oil and grease, pesticides, sediment, temperature, toxicity, and turbidity will be evaluated for compliance with the Basin Plan standards.

General concerns include all parameters of water quality as flow enters the project boundaries, passes through facility features, and discharges downstream. Direct and

indirect effects of the project on aquatic ecosystem health, on recreational opportunity, and on domestic and agricultural supply will be considered. Specific issues that will need to be addressed for the issuance of 401 Certification and for disclosure in the Applicant Prepared Environmental Assessment include, but are not limited to the following:

- The primary purpose of the Oroville project is to provide a supply of water for various municipalities and for irrigation, power generation is recognized as incidental use of project waters. The licensee must demonstrate that primary water uses can be satisfied in season and in magnitude prior to scheduling delivery of stored water for power generation.
- Lake Oroville releases made for power generation may cause dramatic fluctuations in lake level. What are the potential impacts of fluctuation zone and surface elevation change on recreation opportunities and on fish and wildlife habitat?
- Proximity of project features and recreational facilities to shoreline and banks of water bodies offers potential for introduction of nutrients and bacterial contaminants to these waters. What are the water quality trends (including, but not limited to nitrogen, phosphorous and coliform bacteria levels) associated with project-related activities?
- Lake Oroville, fed by tributaries that have a history of gold mining activity, has potential for accumulation of elemental mercury in its basin sediments. Potential presence and uptake of methylmercury through the food chain must be assessed.
- Both coldwater and warmwater habitat, spawning, and migration uses have been designated for surface waters potentially affected by the project. A determination must be made as to specific thermal habitat that may be reasonably provided in each water body within project boundaries and downstream of the project.
- Depth and capacity of the Oroville reservoir creates a thermally stratified condition. What is the cold water pool retained in the basin and what is its availability for release in various water year types?
- Thermalito Afterbay acts as a thermal retention basin for project water prior to delivery to water districts outside the project boundary. How do releases from this water body affect the stream temperature and dissolved oxygen content of Feather River receiving waters?
- The Feather River's low-flow reach has historically provided spawning habitat for a cold water fishery. How have reduced flows to this streamreach affected water temperature and gravel substrate necessary for successful salmonid reproduction?
- Project features and operations alter the hydrology of the system, creating the possibility for scour zones within both natural and designed channels. What affects do discharge and ramping rates have on substrate scour and the mobilization of sediments into the water column downstream? How have turbidity levels been affected by project operation?

- Alterations in stream hydrology affect the natural fluvial geomorphologic processes of a riverine system. How has the change in magnitude, frequency and timing of peak flows on the Feather River affected riparian vegetation recruitment in the low-flow reach and immediately downstream of the Afterbay?
- Various recreational and public use facilities were designated as mitigation measures to minimize impacts resulting from the original Oroville Project construction. The Licensee should provide a complete inventory of recreational mitigation obligations required by Articles of the existing FERC License, and should clearly disclose the current status of compliance with those measures.

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